

## ***CTE Standards Unpacking*** ***Introduction to Health Informatics***

**Course:** Introduction to Health Informatics

**Course Description:** Health Informatics is a multidisciplinary approach to automated collection, using and sharing of personal and epidemiologic health information. The Health Informatics course will introduce students to the necessary skills and knowledge to work in places such as medical groups, hospitals, clinics, health insurance organizations, research, hardware and software vendors, internet companies, and many others.

**Career Cluster:** Health Science

**Prerequisites:** Recommend taking Medical Terminology first

**Program of Study Application:** Introduction to Health Informatics is the first pathway course in the Health Science career cluster, Therapeutic Services pathway. The course would follow participation in one or more cluster courses. Completion of Introduction to Health Informatics would prepare a student to participate in further pathway courses in the Health Informatics pathway or a capstone experience.

<b>INDICATOR #HI 1: Communicate health information accurately and within legal and regulatory guidelines, upholding the strictest standards of confidentiality.</b>		
<b>SUB-INDICATOR 1.1 (Webb Level: 2 Skill/Concept):</b> Apply accuracy, effectiveness and timeliness to the transfer of information.		
<b>SUB-INDICATOR 1.2 (Webb Level: 2 Skill/Concept):</b> Summarize how legal and regulatory requirements apply to the transfer of information.		
<b>SUB-INDICATOR 1.3 (Webb Level: 2 Skill/Concept):</b> Distinguish who in the organization needs information and when they need it.		
<b>SUB-INDICATOR 1.4 (Webb Level: 2 Skill/Concept):</b> Organize recorded information and other documents within the Health Insurance Portability and Accountability Act (HIPAA) protocols to ensure confidentiality and privacy.		
<b>SUB-INDICATOR 1.5 (Webb Level: 1 Recall):</b> Communicate information ensuring confidentiality of content is maintained.		
<b>Knowledge (Factual):</b> -HIPAA and regulatory guidelines of confidentiality and communication  -Chain of command for relaying information  -Varying forms of electronic health records	<b>Understand (Conceptual):</b> -Importance of following confidentiality guidelines  -Value of knowing and following the chain of command	<b>Do (Application):</b> -Research confidentiality regulations in healthcare and how they apply to the transfer of information within healthcare  -Explore local agencies to identify their chain of command

	-Importance of written communication and charting in healthcare including accuracy, effectiveness, and timeliness	-Practice accurate documentation within a mock patient record  -Tour a facility to observe the transferring of information
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**Benchmarks:**

*Students will be assessed on their ability to:*

- Identify the implications found in real case studies where HIPAA regulations were broken; compare and contrast the effects on both the patient and the workers
- Complete accurate documentation within a mock patient record

***Academic Connections***

<b>ELA Literacy and/or Math Standard (if applicable, Science and/or Social Studies Standard):</b>	<b>Sample Performance Task Aligned to the Academic Standard(s):</b>
<p>RI.9-10.1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.</p> <p>W.9-10.1.4 Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.</p>	<p>-Summarize confidentiality regulations and connection to the transfer of information within the healthcare chain of command</p> <p>-Complete accurate documentation within a mock patient record</p>

**INDICATOR #HI 2: Describe the content and diverse uses of health information.**

**SUB-INDICATOR 2.1 (Webb Level: 2 Skill/Concept):** Interpret and extract information from medical records and documents.

**SUB-INDICATOR 2.2 (Webb Level: 2 Skill/Concept):** Collect appropriate, accurate information including proper codes to record charges for reimbursement.

**SUB-INDICATOR 2.3 (Webb Level: 1 Recall):** Identify and apply accurate medical terminology.

**SUB-INDICATOR 2.4 (Webb Level: 2 Skill/Concept):** Determine the need for requesting further clarification when transcribing/transferring information that

may be unclear.		
<b>SUB-INDICATOR 2.5 (Webb Level: 2 Skill/Concept):</b> Assess and apply information for regulatory and legal purposes.		
<b>Knowledge (Factual):</b> -Use of electronic medical records  -Medical terminology  -Medical coding  -Professional communication  -Legal regulations of medical records and coding	<b>Understand (Conceptual):</b> -Ability to navigate medical records efficiently  -Importance of spelling, grammar, and usage of medical terminology  -Value of accurate coding of medical diagnoses  -Importance of seeking clarification when something is unclear  -Importance of following legal guidelines	<b>Do (Application):</b> -Practice utilizing an electronic medical record  -Review medical terminology to become proficient  -Interact with medical coders and transcriptionists to learn the value of accurate documentation and legal regulations
<b>Benchmarks:</b> <i>Students will be assessed on their ability to:</i> <ul style="list-style-type: none"> <li>• Correctly transcribe a sample medical record using proper terminology</li> <li>• Apply correct codes to sample medical documentation</li> <li>• Write a reflection about what was learned from interactions with medical coders and transcriptionists</li> </ul>		
<b>Academic Connections</b>		
<b>ELA Literacy and/or Math Standard (if applicable, Science and/or Social Studies Standard):</b>  RI.9-10.1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.  W.9-10.1.4 Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.	<b>Sample Performance Task Aligned to the Academic Standard(s):</b>  -Research and analyze legal regulations for medical documentation.  -Correctly transcribe a sample medical record using proper terminology	

**INDICATOR #HI 3: Demonstrate the use of systems used to capture, retrieve and maintain confidential health information from internal and external sources.**

**SUB-INDICATOR 3.1 (Webb Level: 3 Strategic Thinking):** Formulate and accurately document required information.

**SUB-INDICATOR 3.2 (Webb Level: 2 Skill/Content):** Interpret information that has been collected.

**SUB-INDICATOR 3.3 (Webb Level: 3 Strategic Thinking):** Differentiate the purposes and audiences for whom information is collected.

**SUB-INDICATOR 3.4 (Webb Level: 2 Skill/Concept):** Prepare accurate documentation for various audiences within legal and regulatory requirements, as requested.

**SUB-INDICATOR 3.5 (Webb Level: 1 Recall):** Disseminate information to various audiences using systems and guidelines within the facility.

**SUB-INDICATOR 3.6 (Webb Level: 2 Skill/Concept):** Organize and maintain a records storage system within legal requirements and protocols.

**Knowledge (Factual):**

- Documentation requirements
- Purposes of medical documentation
- Guidelines for distributing and storing medical information

**Understand (Conceptual):**

- Importance of accurate documentation
- Value of interpreting medical documentation
- Variety of audiences that interact with the medical records
- Importance of following legal regulations and the implications of not doing so
- Purpose of proper transmission and storage of medical information

**Do (Application):**

- Research requirements, guidelines, and purposes for medical documentation transmission and storage
- Practice scenarios where storage or transmission of medical records is needed
- Brainstorm possible receivers of medical information and how they might utilize the documents
- Invite guest speakers to speak about their experiences using electronic medical record

**Benchmarks:**

*Students will be assessed on their ability to:*

- Prepare a sample storage system for documents that meets legal requirements and protocols
- Create a healthcare system in which students take medical roles and route medical documents to the correct location
- Write a reflection on role playing, discussing challenges encountered through the experience

### ***Academic Connections***

#### **ELA Literacy and/or Math Standard (if applicable, Science and/or Social Studies Standard):**

9-10.W.2. Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.

9-10.W.6 Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to the other information and to display information flexibly and dynamically.

9-10.RST.7 Translate quantitative or technical information expressed in words in a text into visual form (e.g. a table or chart) and translate the information expressed visually or mathematically

HS-PS4-2 Evaluate questions about the advantages of using a digital transmission and storage of information.

#### **Sample Performance Task Aligned to the Academic Standard(s):**

-Write a reflection on the role playing event and discuss challenges encountered throughout the experience.

-Accurately chart medical documentation in an electronic medical record.

-Create an infographic to display the possible routes of a medical document.

-Discuss the pro's and con's of keeping electronic records.

### **Additional Resources**

- Medical Coding Information Website: <http://www.medicalbillingandcoding.org/learn-more-about-coding/>
- Health Informatics Website: <https://www.amia.org/about-amia/science-informatics>
- American Association of Medical Assistants Website: <http://www.aama-ntl.org/cma-aama-exam/study/medical-terminology-practice-test>
- Common Medical Terminology Website: <http://www.globalrph.com/medterm.htm>
- Quizlet Flashcard Practice of Medical Terminology: <https://quizlet.com/759301/medical-terminology-350-flash-cards/>
- Electronic Health Information Management Association: <http://www.ahima.org/>
- AMIA: Advanced Management of Information Association <https://www.amia.org/ahic>
- HOTT Health Occupations of Today and Tomorrow: <http://healthcareers.sd.gov/>